

From owner-qrp-1@netcom.com Fri Sep 23 15:28:29 1994  
Subject: Re: Block Diagrams, Schematics etc.  
Date: Fri, 23 Sep 94 10:06:37 PDT  
From: Eric Swartz WA6HHQ <erics@cruzio.com>  
Message-Id: <9409231006.aa23401@cruzio.com>

Ray Anderson writes:

>  
> A Question:  
> What form should these take to be of most use to others  
> on the net? Postscript?? GIF?? Whatever???  
>  
> Personally, I've got a Sun workstation that can handle just about  
> any format, but I'm sure there are a lot of people that may have  
> problems with one form or another for any of a variety of reasons.  
>

Ray, I'm interested in being on the group mailing list for the Inet rig.

Running on a PC here - can't handle postscript, but can handle most other  
formats such as GIF, TIF etc.

(Is there a S/W converter for postscript to regular HP laserjet format?)

Eric, WA6HHQ

--

From owner-qrp-1@netcom.com Fri Sep 23 19:53:12 1994  
Date: Fri, 23 Sep 1994 11:06:43 +0800  
From: Raymond.Anderson@EBay.Sun.COM (Ray Anderson)  
Message-Id: <9409231806.AA16765@uranium.EBay.Sun.COM>  
Subject: Re: Block Diagrams, Schematics etc.

To all:

The comments seem to be running 100% towards Postscript as the  
preferred information exchange format. So I guess I'll produce the  
schematics, block diagrams and whatever in PS format.

Someone also suggested that circuit board patterns also be posted in  
HPGL for those with plotters. On PCB patterns that others may want  
to replicate I think that I'll provide them in 3 formats: Postscript,  
HPGL and Gerber. That way people can either print them out on a  
laser printer, plot them, or get film made on a laser plotter as they  
desire. If anyone wants the Autocad .dwg version of PCB patterns, I  
can make those available on request.

Instead of spraying all this graphics stuff all over the mail list, I will be placing it on an FTP site. The drawings etc. will be available on ftp.netcom.com in the /pub/rander/qrp directory.

If others have schematics, layouts or whatever pertinent to the ongoing INET rig project feel free to upload them to the FTP site. Upload to ftp.netcom.com in the /pub/rander/uploads directory. After you upload something, send me e-mail to let me know they are there, so I can move the files to the qrp directory where they will be available to all.

At present there aren't any files related to this project on the FTP site, but perhaps I'll start getting some stuff put there this weekend. I'll post a note to the list when I get some stuff available there.

72's de WB6TPU Ray

raymonda@uranium.ebay.sun.com

From owner-qrp-l@netcom.com Fri Sep 23 20:16:56 1994  
Date: Fri, 23 Sep 1994 16:32:00 -0400  
From: "todd (t.w.) nichols" <tnichols@bnr.ca>  
Message-Id: <"18174 Fri Sep 23 16:33:05 1994"@bnr.ca>  
Subject: Re: Block Diagrams, Schematics etc.

In message "Re: Block Diagrams, Schematics etc.", you write:

>Running on a PC here - can't handle postscript, but can handle most other  
>formats such as GIF, TIF etc.  
>  
>(Is there a S/W converter for postscript to regular HP laserjet format?)  
>  
>Eric, WA6HHQ  
>

I vote for Postscript - it's the most portable graphical interchange format I have ever used - and I've used VAXes, MACs, PCs, HP and Sun workstations, and I've used dot-matrix, HP-PCL, Imagen, Laserwriter, and several Postscript-capable HP laser printers. If you are on a Mac and have access to a Laserwriter, it recognizes Postscript. If you are on a PC, get a copy of Ghostscript off the net or off a BBS. It will print to just about any printer you have. And the quality will be great. If you have a workstation on a network, you can probably dump to a printer that already recognizes Postscript.

I can print GIF, TIFF, etc, also. But the quality has always stunk compared to Postscript.

Todd

-----  
Todd Nichols                      Bell Northern Research, Ottawa, Ontario      (613) 765-3560  
tnichols@bnr.ca  
KB0HQ/VE3                      BNR didn't say it; I did

From owner-qrp-l@netcom.com Fri Sep 23 19:16:12 1994  
Date: Fri, 23 Sep 94 09:06:06 HST  
From: jeffrey@math.hawaii.edu (Jeffrey Herman)  
Message-Id: <9409231906.AA12617@kahuna.math.hawaii.edu>  
Subject: Budget Hamming

First thing to consider is an all-band receiver. For years I used a DX-60 (RS) as my station receiver; now I use a DX-400 (digital readout, continuous coverage from 150 kc to 30 Mc, .5 uV sens). Sure, it's a consumer shortwave rcvr but so what? It works just fine as a ham rcvr, and the price tag won't upset your stomach. With a general coverage rcvr the new ham won't have to have to buy these single band kit xcvs with their mediocre rcvrs. And there sure is a lot to listen to outside the ham bands!

The rcvr should be the biggest expense for the new ham. Xmtrs, on the other hand, can be homebrewed running as little or as much power as one desires; the construction of an xmtr is not critical, and it's a great way of applying theory to practice. As most of you know, I challenge myself to build my xmtrs from old discarded TV sets; it's rare that I have to buy \*any\* components for my xmtrs.

.73,  
Jeff NH6IL

From owner-qrp-l@netcom.com Sat Sep 24 01:42:02 1994  
From: Mike.Czuhajewski@hambbs.wb3ffv.ampr.org (Mike Czuhajewski)  
Subject: CP80?  
Date: Fri, 23 Sep 94 23:18:54 EST5EDT  
Message-Id: <1994Sep23.231854.16746@wb3ffv.ampr.org>

To K5F0: when you come to Silver Spring, MD next week, can you bring along a CW keyboard? K3TKS says his is broken. I want to see you do CP80 (I believe it, but would love to see someone do it in person). I'm a wimp--the highest I've ever been clocked (by someone with a CW keyboard) was a mere 55 WPM (and did THAT take some intense

concentration!!!). 73 and Queue Our Pea DE WA8MCQ

--

Mike Czuhajewski, user of the UniBoard System @ wb3ffv.ampr.org  
E-Mail: Mike.Czuhajewski@hambbs.wb3ffv.ampr.org  
The WB3FFV Amateur Radio BBS - Located in Baltimore, Maryland USA  
Supporting the Amateur Radio Hobby, and TCP/IP InterNetworking

From owner-qrp-1@netcom.com Fri Sep 23 19:44:17 1994  
Date: Fri, 23 Sep 94 13:59:06 -0500  
From: adams@chuck.dallas.sgi.com (chuck adams)  
Message-Id: <9409231859.AA09635@chuck.dallas.sgi.com>  
Subject: Formatting Issues

Gang,

Here we go again on this issue that has plagued  
computer hackers for ages.

HPGL - Hewlett-Packard Graphics Language - used for plotters  
PostScript - printing language for printers like the Applewriter, etc.  
GIF - Graphics Interchange Format

and a multitude of other formats.

There are a number of tools available to get information  
from one format to another, but not all of them.

The HPGL, which is what my plot routines use that I produced  
schematics for the newsletter and MXM's rig, I can convert to  
PostScript.

HPGL will take up less disk space.  
PostScript will be printable without conversion and also  
displayable without printing on all workstations and most  
PCs.

GIF, created and copyright by Compuserve, is used for photos  
etc., but doesn't seem to be all that nice and neat for scaling, etc.

My \$0.02 worth of information and opinion. My vote is start  
with the lowest, HPGL, and we can migrate upward easily, but  
it's not that easy going the other way. W7EL in his Elneq  
does HPGL, which is just fine. It's accurate and it's portable.

dit dit

SIG

Chuck Adams K5FO CP-60

adams@sgi.com

From owner-qrp-l@netcom.com Fri Sep 23 23:14:48 1994  
Message-Id: <9409240101.AA03806@rodgers.rain.com>  
From: lbrunson@rodgers.rain.com  
Date: Fri, 23 Sep 1994 17:53:18 PDT  
Subject: Frequency counter/ panel meter for rigs

I built the frequency counter in the most recent issue of Popular Electronics. It is a very clever design and will lend itself well to QRP rigs. It uses a 1 line by 16 character LCD display, a 74hc132, and a little 18 pin dip microcontroller (PIC 16C54). Since I only had a 2 line by 16 character LCD display I downloaded the source code and modified it to work. It started me thinking.....

This weekend, I am modifying the code to drop the auto ranging feature and, instead, am adding a bargraph display on the bottom line which will be coupled to a cheap 8 bit serial a/d converter chip. I'll use it on the front panel of my next rig for frequency and the bargraph for an S/Power/Battery meter.

If I am very clever, I might even squeeze my memory keyer in the same micro....

Sound interesting?

7★ Lowell

Lowell Brunson (503) 681-0417  
Rosenet: lbrunson@roland.co.jp  
Internet: lbrunson@rodgers.rain.com (preferred)  
lowell@teleport.com  
Packet Radio: KC7DX@w0rli.or.usa.noam

From owner-qrp-l@netcom.com Fri Sep 23 10:49:48 1994  
Date: Fri, 23 Sep 1994 07:15:46 -0500 (CDT)  
From: Jeff Gold <JMG@tntech.edu>  
Subject: FT-7  
Message-Id: <01HHFYTHPCV6A401P1@tntech.edu>

What is a FT-7.. is it a QRP FT-77? solid state? size? bands?  
modes

Jeff, AC4HF

From owner-qrp-l@netcom.com Sat Sep 24 01:55:01 1994  
From: Mike.Czuhajewski@hambbs.wb3ffv.ampr.org (Mike Czuhajewski)  
Subject: Health of qrp-l  
Date: Fri, 23 Sep 94 23:23:35 EST5EDT  
Message-Id: <1994Sep23.232335.16746@wb3ffv.ampr.org>

I know there have been a lot of "defections" due to the loss of the digest function (and we don't know how many use the proper procedure, because we don't see those messages). The qrp-l list is still alive and kicking, though. A few months ago someone said there were 400-something subscribers on qrp@think.com, I think, including some which were just relays to other nets. I just did a "who qrp-l" to listserv@netcom.com (don't use Majordomo, even though that's what it's running) and the reply was 387 lines long. We've lost some folks, but still not too shabby. 73 and Queue Our Pea DE WA8MCQ

--

Mike Czuhajewski, user of the UniBoard System @ wb3ffv.ampr.org  
E-Mail: Mike.Czuhajewski@hambbs.wb3ffv.ampr.org  
The WB3FFV Amateur Radio BBS - Located in Baltimore, Maryland USA  
Supporting the Amateur Radio Hobby, and TCP/IP InterNetworking

From owner-qrp-l@netcom.com Sat Sep 24 04:40:00 1994  
Date: Fri, 23 Sep 94 20:46:34 HST  
From: jeffrey@math.hawaii.edu (Jeffrey Herman)  
Message-Id: <9409240646.AA14206@kahuna.math.hawaii.edu>  
Subject: Re: Health of qrp-l

And for those of you who are considering unsubscribing due to there not being a digest, a daily and 3-day digest are available via ftp:  
ftp sunsite.unc.edu then:  
cd pub/academic/agriculture/agronomy then:  
get DAILY.QRP (can't recall the title of the 3-day digest but do a 'dir' or 'ls' to get its title).  
Also, the daily digest of Boatanchors can be gotten by:  
get DAILY.BA

.73,  
Jeff NH6IL

From owner-qrp-l@netcom.com Fri Sep 23 10:44:17 1994  
Message-Id: <2e82bca8.pandora@pandora.uucp>  
Date: Fri, 23 Sep 1994 19:31:45 +0800  
From: "W. Daniel" <pandora!daniel>  
Subject: Hi

Hi,

Anyone have an IC-22A for sale?

73,

Daniel

--

```
+-----+-----+
| Daniel Wee | daniel%pandora@csah.com |
| UUCP1.12b  | daniel.wee@f516.n600.z6.fidonet.org |
+-----+-----+
```

\*\* It is great wisdom not to rush into action nor  
obstinately hold our own opinions \*\* Thomas A Kempis

From owner-qrp-l@netcom.com Fri Sep 23 19:18:26 1994  
Message-Id: <2e831958.pandora@pandora.uucp>  
Date: Sat, 24 Sep 1994 02:07:17 +0800  
From: "W. Daniel" <pandora!daniel>  
Subject: Re: Hi

On Fri, 23 Sep 94 11:27:20 EDT, rossi@vfl.paramax.com wrote:

> ->Hi,

> ->

> -> Anyone have an IC-22A for sale?

>

> I have one but was not interested in selling it... Just curious, what are  
> they worth these days? This one has something like 18 channels worth of  
> crystals in it...

No idea how much it costs but am desperately looking for one. Was told that it  
should not be more than 100 bux. The reason for the desperation is that the  
authorities want to give me a license but insist on seeing my equipment first!  
Yes, dumb, but they're the law.

Anyway, they've only approved exactly 10 models for 2M use and exactly 10  
models are out of production, and more than 10 years old. There are a few  
models that I am looking for:-

- 1) Icom IC-215
- 2) Icom IC-22A
- 3) Kenwood TR-2200A, TR-2200G
- 4) Kenwood TR-7200, TR-7200G
- 5) Yaesu FT-2F
- 6) Yaesu FT-221

You may try other CRYSTAL controlled only models but bear in mind that each

radio you submit for type approval will cost you \$200 additional fee. Yep, I could buy another rig with that kind of money if I had it.

If you're wondering, they DON'T allow ANY kind of synthesized 2M equipment under ANY circumstances, and have no plans for allowing them. The reason is that amateurs are only allowed about 5 or 6 spot frequencies on the 2M band. Thus you can see the reason for my desperation.

Among other things I had to do was:-

- 1) Submit 2 character references
- 2) Sign a statutory declaration of secrecy at the high court
- 3) Give model and serial # of radio AND antenna! (must be < 10w ERP)
- 4) Give schematic of installation and antenna
- 5) Submit letter from Landlord approving installation of antenna

All this before they even consider issuing me a license. I need to get this radio by next month cos that's when they are supposed to give the license to me. I've got all my other papers ready and submitted most of them, now I need to get a radio (an almost extinct one at that). After all this, there is still no guarantee that they will issue a license, and they are not required to give a reason.

Oh, did I mention? They will send people to inspect my station to ensure that I am complying with all regulations AND that my equipment complies with what is declared. If I buy a new radio, that too needs declaration and approval first.

I appreciate any help I can get at this point.

>

> I want to put it on packet this fall..

Sounds like a good idea to me.

73,  
Daniel

--

```
+-----+-----+
| Daniel Wee | daniel%pandora@csah.com |
| UUCP1.12b  | daniel.wee@f516.n600.z6.fidonet.org |
+-----+-----+
```

★★ It is great wisdom not to rush into action nor  
obstinately hold our own opinions ★★ Thomas A Kempis

From owner-qrp-l@netcom.com Sat Sep 24 00:49:55 1994  
Date: Sat, 24 Sep 1994 02:17:00 +0000  
From: william.redfearn.cmwd@nt.com



Message-Id: <"9265 Fri Sep 23 21:20:17 1994"@nt.com>

Subject: RE: Low Budget hamming - Part II

This is not a fixed recipe for putting together a ham station on a budget but mainly a collection of thoughts that I have used as a guide over the years. I make no claim to be an expert on this subject ( but I have noticed some people following me around at hamfests as I scrounge... er.. shop :-) ).

Hamming on a minimum budget usually means you'll be building your own equipment or buying it used. Buyer Beware is the watchword for used gear. If you require that a used piece of gear work, then test it carefully before buying it. If you can't test it don't buy it. I can tell you the story about the Ten Tec 509 that I bought for \$50 and only had to re-string the dial or the one about the Ten Tec Triton that I bought for \$50 that was "only missing the top and bottom covers" which actually had every active device in the transmit stages blown.

If you can only buy one piece of gear, then get the very best ham band receiver that you can afford. It is usually beyond the reach of a newcomer to build, test, and align a stable multi-band receiver. While a consumer type general coverage receiver can be used, they generally don't have good enough selectivity for serious ham band use (just check 40 Meters during a contest). However, with some help a simple transmitter can be built and provide many hours of use.

Antenna tuners can be built with hand wound inductors and tuning capacitors liberated from old broadcast radios. These have been getting kind of rare lately but I can usually find good capacitors at good prices by hunting through the "junk" boxes at hamfests.

A power/SWR meter is the one piece of test gear that you may need to buy. However an old CB type SWR meter will usually work with 100 watt HF rigs and there are a couple of good meter kits that are easy to build and calibrate.

Usually antennas and feedline can be easily constructed from scrounged.. er.. recycled wire. Insulators can be fabricated from several different household sources. Any of the common wire antennas (dipoles, loops, verticals, and long wires) can be built. Open wire transmission line can be made from wire and insulators.

"Roll ends" of CATV coax can be gotten for free and makes good coax for HF antennas. Most manufacturers rate their radios to operate into a 50 - 75 ohm load so using 75 ohm coax is no problem.

So, based on these guidelines how much should it cost to get a Ham

HF station set up and running? Generally I say that depending on what you know and what you have, expect to spend around \$300 - \$500. Too expensive for a school student without a full time job you say? Well, compared to other things like a video game with several cartridges connected to a color TV, or a personal CD player with deluxe headphones and a stack of CDs, or a boom box, or the super deluxe sneakers with the gravity assisted air expansion system and built in four way flashers which seem to be a necessary part of today's culture maybe \$300 - \$500 is not all that much money. The good part is that you don't have to buy everything at once. Start with a good receiver and antenna to work on code practice. Then add a transmitter, tuner, and power meter later as you need them. Sometimes you can borrow equipment to use for a while.

Again, know your own skills, consult with your Elmer, and make your best decision.

Above all this is a fun hobby, so have fun!

=====  
Dave Redfearn, SR PC LAN Analyst Northern Telecom RTP, NC.  
ph.(919) 992-3925 email: cmwdr01@nt.com qrl? de N4ELM/qrp

All opinions are my own and do not necessarily reflect the views of my employer, co-workers or any other person, real or imaginary.

From owner-qrp-l@netcom.com Fri Sep 23 23:40:35 1994  
Date: Fri, 23 Sep 94 12:53:03 PST  
From: Jerry A Kreifels <Jerry\_A\_Kreifels@ccm.fm.intel.com>  
Message-Id: <940923125303\_1@ccm.hf.intel.com>  
Subject: Low budget Hamming: More info please!

Text item: Text\_1

I'm new to the qrp-l mail group, and a new ham (Tech+ arrived 1 week ago. Passed advanced this month so that ticket should be on the way.) The low budget hamming message from Jeff, AB6MB, caught my eye. Where can I get more info on the mentioned NN1G transceiver, or other big bang for small bucks rigs? I'd like to get on HF for something in the neighborhood of \$100 or so, but my current HF equipment consists of a code key. (I blew most of my hamming budget on a Yaesu FT530 2M/70cm handheld.) I'm not afraid of building a kit, but am a bit leary of building from scratch.

Other constraints I have to work with are antenna restrictions; nothing

external in my neighborhood. I do have significant attic space, possibly enough length for half-wave dipole down to 40M band, and I think about 12 ft of vertical space. Roof is concrete tile. I'm looking for any suggestions for radios, antennas, and purchase sources.

I'm also wondering what kind of range to expect running QRP. For what its worth, I live in the Sierra foothills just East of Sacramento CA.

Any help is greatly appreciated. Thanks.

Jerry, KE6MFJ  
Jerry\_A\_Kreifels@ccm.fm.intel.com

From owner-qrp-l@netcom.com Fri Sep 23 12:03:32 1994  
Date: Fri, 23 Sep 1994 08:27:58 -0400 (EDT)  
From: prvalko <prvalko@vela.acs.oakland.edu>  
Subject: Re: Low budget hamming?  
Message-Id: <Pine.3.89.9409230830.A26848-01000000@vela.acs.oakland.edu>

Well if your young friend was in Michigan, we could beat that by a mile.

Our club (L'Anse Cruese ARC - Mt. Clemens, MI) offers \*free\* radios to high school aged, and younger, novices. The club is pretty big and every year we set aside a couple hundred bucks to buy nice beginner rigs such as HW-16s and Century 21s. We even have a couple HW-101s and a TR-3 in inventory. We "loan" these out to new hams for free. It's a great program as we are actually a high school club, although there are only a couple students involved in a club of over 200 members.

The second issue, and I don't wanna start a flame war here, is that I would NEVER recommend QRP operation to a beginning ham. I know opinions on this differ greatly, but IMHO a new novice has a pretty tough row-to-hoe as it is. Complicating the matter with 5 watts output and (generally) primitive receivers can equal total frustration. Remember, novices tend to work other novices, and they may not have the experienced ear to pick out slightly weaker QRPP signals from the hetrodynes on 40M.

Respectfully,

=paul= wb8zjl

From owner-qrp-l@netcom.com Fri Sep 23 15:07:20 1994  
Date: Fri, 23 Sep 1994 09:38:01 -0700 (PDT)  
From: Alan Kaul <kaul@netcom.com>  
Subject: Re: Low budget hamming?  
Message-Id: <Pine.3.89.9409230922.A29929-01000000@netcom15>

Right on, PAUL.

QRP is great! But we have to face the fact that it probably isn't for the average beginner. If a newcomer Ham's REALITY (QRP, DC rcvr, etc) doesn't live up to his/her DREAMS and EXPECTATIONS (working the World with a few watts as a brand new Ham), then we may have done more harm than good. I know of too many newcomers who got so frustrated in their first weeks, that they basically gave up! 72 de alan

[<Alan Kaul, W6RCL>] kaul@netcom.com

From owner-qrp-l@netcom.com Sat Sep 24 00:37:24 1994  
Date: Sat, 24 Sep 1994 02:17:00 +0000  
From: william.redfearn.cmwdrr01@nt.com  
Message-Id: <"9237 Fri Sep 23 21:20:01 1994"@nt.com>  
Subject: RE:Low Budget hamming?

Hi Jeff,

I tend to group QRP operating and getting a new ham's station set up as separate challenges. There are aspects which are common to both, simple equipment, homemade equipment, and low power operation but the largest difference is in the operators themselves. Generally QRP operators are hams who already have experience in setting up and running radio gear and in making contacts "on the air". On the other hand most new hams are "NEW HAMS". Generally they have just passed the test or just received their license from the FCC and do not have much experience in actually operating radio gear and making contacts. It may be kind of like being dropped into the "Ham Radio Twilight Zone" with all the new language to learn, the variety of equipment to buy, and the confusing array of rules and regulations. The "QRP Twilight Zone" is an entirely different place but I'll save that for another time.

So here are some general guidelines that I suggest to new Hams trying to get a station set up and on the air.

- 1 - Find an ELMER, a person (or persons) who is an experienced ham who can answer questions and help get your station set up. Your ELMER's advice will save you time and money.

- 2 - Set a budget. Know how much you can spend and spend it wisely.

- 3 - Decide exactly what you want to do and limit yourself to that.

Amateur Radio is a large and complex hobby and has many different areas, modes, privileges, and bands. Try to limit yourself to one or two different interest areas and work on them. In our area most new hams start with 2 Meter FM, 2 Meter Packet, or some basic HF operation. Later they will move into some of the other areas in the hobby.

- 4 - Whenever possible, build instead of buy. Homebuilt equipment and accessories work just as well as commercial stuff, sometimes better plus

you'll learn something along the way ( sometimes all I learn is not to do THAT again :- ) ). Your ELMER is a valuble resource, use his knowledge and experience.

5 - Whatever type of station you set up, get on the air and use it. Yes, you are going to make mistakes, that is part of the hobby. Every ham on the air was a beginner at one time or another and made his/her share of mistakes. That may be the only absolute thing that all hams everywhere have in common. So jump on in there with everyone else and enjoy the hobby.

=====

Dave Redfearn, SR PC LAN Analyst Northern Telecom RTP, NC.  
ph.(919) 992-3925 email: cmwdr01@nt.com qrl? de N4ELM/qrp

All opinions are my own and do not necessarily reflect the views of my employer, co-workers or any other person, real or imaginary.

From owner-qrp-1@netcom.com Sat Sep 24 05:41:45 1994  
Date: Sat, 24 Sep 1994 00:54:00 -0700 (PDT)  
From: Alan Kaul <kaul@netcom.com>  
Subject: Re: Milliwatting the Norcal 40  
Message-Id: <Pine.3.89.9409240031.A26106-0100000@netcom4>

On Thu, 22 Sep 1994, Wayne Burdick wrote:

> I think it will go all the way to zero; at some point the drive level gets  
> too low to forward-bias the final amp. Connect a hi-Z voltmeter (such as a  
> DMM) and an RF probe to the antenna jack and measure the RF voltage (Vrms).  
> You can then calculate the power from:  
>  
>  $P = V_{rms} * V_{rms} / 50$   
>  
> assuming you have a 50-ohm dummy load or well-matched antenna.  
>  
> I'd like to know your results.  
>  
> 72,  
> Wayne  
>  
Wayne, et. al.

I took your advice and wired up an RF probe ala ARRL Handbook  
(.01 mfd cap, 1n34a diode, 4.7m resistor) and my Radio Shack  
DMM, a 4-W, 50 Ohm dummy load and ran the tests.

The Handbook suggests such a method will measure Vrms to within about 10%. It might be the vagaries of my peculiar system, but I question the exact precision in my case because a full power measurement on the output of the 2SC799 reads 12.25 Vrms (which calculates to 3W output) ----- not likely with 13.5V to the rig at keydown 200 mils.

Anyway, the test proceeded til the drive control was turned to minimum. The Vrms across the dummy load was 0.08 V and  $(0.08 * 0.08)/50 = .000128$  W --- or significantly less than a milliwatt. Whatever the accurate number is, it is way down there. My Daiwa Powermeter (15W full scale) stopped reading early in the game!!!

If we use approx. 50 percent as the error figure on the high power measurement (output power closer to 2W than 3W) AND presuming the error is linear -- i.e. the same at both ends of the scale, then the output is somewhere between .00007 and .0002 Watts. I guess the next thing is to have QSO's at that level (it won't take anyone too far away to earn the 1000 miles per watt award).

One of these days I'm going to get some accurate test gear so I can be certain of these things.

But one thing does seem assured, the Norcal 40 would be an ideal rig TO MIX in a TRANSVERTER circuit to either 6 or 2 Meters (or 160-80-30-17-12-Meters for that matter [harmonic problems at 20-15-10M], because the transmit voltage probably can be set low enough not to damage the MIXER. If there was any question, a simple 3-or-6-or-9 dB pad could be added between the Norcal 40 and the Transverter to make sure the transmitting power doesn't cause any damage.

You've designed a terrific rig, Wayne. Thanks! And 72, de alan

W6RCL, Alan S. Kaul ----- kaul @ netcom . com

From owner-qrp-l@netcom.com Sat Sep 24 02:04:16 1994  
From: Mike.Czuhajewski@hambbs.wb3ffv.ampr.org (Mike Czuhajewski)  
Subject: QRP for starting ham  
Date: Fri, 23 Sep 94 22:55:23 EST5EDT  
Message-Id: <1994Sep23.225523.16746@wb3ffv.ampr.org>

I agree with Paul--I would not recommend, in the vast majority of cases, that a new ham start with QRP, and when new hams tell me they

want to go QRP, I make sure they know what they're letting themselves in for. It's not for everyone. I do have a ham just down the road, N3GGP, who started out (as KA3SDT) running QRP as a new ham, even though his rig was some old Heath SSB TX/RXes capable of running considerably more. He did quite well, starting out his ham career with QRP, but then he was a retired navy communicator, who spend 23 years on the air in the Navy! Most new hams don't have that advantage! (And an unpaid advertisement--the clock is now ticking on orders for the reprints of the Milliwatt! Remember, this is a one-time only, advance orders only affair.) 73 and Queue Our Pea DE WA8MCQ

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Mike Czuhajewski, user of the UniBoard System @ wb3ffv.ampr.org  
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The WB3FFV Amateur Radio BBS - Located in Baltimore, Maryland USA  
Supporting the Amateur Radio Hobby, and TCP/IP InterNetworking

From owner-qrp-l@netcom.com Fri Sep 23 16:26:16 1994  
Message-Id: <9409231727.AA17857@mesa5.Mesa.Colorado.EDU>  
Subject: T/R Unit  
Date: Fri, 23 Sep 1994 11:27:03 +0000 (MDT)  
From: "jim rybak" <jrybak@mesa5.mesa.colorado.edu>

I want to build an outboard T/R unit to use a single antenna with separate receiver and QRP transmitter units. Is it better to use a relay or solid state switching? Can anyone recommend a really GOOD circuit?

TNX 73, Jim Rybak W0KSD

From owner-qrp-l@netcom.com Fri Sep 23 16:49:36 1994  
Message-Id: <9409212120.AA03572@bach.nmsu.edu>  
Date: Wed, 21 Sep 1994 15:21:04 -0600  
From: tpettibo@admin.nmsu.edu (Tim Pettibone)  
Subject: Ten Tec Argonaut 509

Yep, \$150 would be a bargain. I sold (sob!) my old 509, the matching 405 linear (shame on me!), a car battery and trickle charger, a homebrew calibrator and audio filter, phone patch, an antenna tuner, for \$350 back in 1991 in TN. Wish I hadn't!

Tim AB5OU

From owner-qrp-l@netcom.com Fri Sep 23 20:16:07 1994  
Date: Fri, 23 Sep 1994 16:19:23 -0500 (CDT)  
From: Jeff Gold <JMG@tnitech.edu>  
Subject: Way Cool!  
Message-Id: <01HHGHL6L65QA405T0@tnitech.edu>

All,

The old HW9 now is Digital display.

recently finished building a S&S Engineering Programable Counter.. PC1. The board, as usual was absolutely tops, as were the instructions and all materials. The parts come packaged seperately and clearly labeled. The board is plated thru and solder masked. It has one of their famous.. you can drop it from a plane cases with nice silk screened panels. It is an easy afternoon's project and when you look at the bottom of the PCB when you are done.. if you are halfway careful. .will look fantastic.

Hooked it to my HW9. Love my HW9.. some bands the analog dial is about right on.. and some like 17, 30 and 80.. not really sure where I am.. although it is pretty close. Didn't want to permantly modify the HW9.. just left out one of the back panel screws and ran the VFO wire from the PC1 to TP1.. programmed the counter to read the right freq (used my TS850 to get it right on) and then took the ground wire from the counter and just attached it to a near by grounded chasis screw.

Nice to know exactly where I am.

Jeff, AC4HF

PS.. if anyone of you have built this, are technically oriented, and a writer that can put things interstingly in plane English.. I would like to co-author the article.

I have really enjoyed the last 2 articles that I coauthored with people from this net.. think it was better than I could have done alone and more exciting (both were accepted for publication). Really think this is a good group of people.